

CURRENT LITERATURE

MINOR NOTICES

North American flora.—The third part of Vol. 10 continues the presentation of the Agaricaceae by MURRILL,¹ the 12 genera of Pholiotanae being presented, excepting the genus *Inocybe*. The 11 genera presented include 324 species, of which 76 are described as new. The largest genera are *Gymnopilus* (85 spp.), *Naucoria* (65 spp.), *Hebeloma* (50 spp.), *Crepidotus* (46 spp.), and *Galerula* (33 spp.). The remaining 45 species are distributed among 6 genera. New species are described in *Crepidotus* (7), *Tubaria* (4), *Galerula* (8), *Naucoria* (21), *Pluteolus* (4), *Mycena* (2), *Gymnopilus* (13), and *Hebeloma* (17).—J. M. C.

NOTES FOR STUDENTS

Carbon assimilation.—JORGENSEN and STILES² have summarized our knowledge of the processes involved in the assimilation of carbon by green plants and the pigments concerned in them. The portion dealing with the pigments themselves has been reviewed by LINK.³ In the introduction the reviewers express the hope that "the following pages will be of interest to those concerned in the development of scientific agriculture as well as to those interested in plant physiology for its own sake." The discussion of the path of gaseous exchange between the leaf and the surrounding atmosphere is based mainly on the work of BLACKMAN and BROWN and ESCOMBE. The conclusion reached is that the proof is now definite that the stomata are the main path of the intake of carbon dioxide into the assimilating aerial leaf of the higher plants. Any intake that may occur through the cuticle is of very minor importance. Carbon assimilation is regarded as a complex of processes which probably obey quite different laws. Attention is called to the 5 obvious factors upon which the rate of carbon assimilation in the leaf may depend: (1) carbon dioxide supply, (2) intensity of illumination, (3) temperature, (4) water supply, (5) quantity of chlorophyll. To these is added BLACKMAN's time factor. It is found that below 25° C. the rate of carbon assimilation a little more than doubles for each rise of 10° C. For cherry laurel this gives a van't Hoff curve

¹ MURRILL, W. A., North American flora 10:part 3. pp. 145-226. Agaricales: Agaricaceae (pars), Agariceae (pars). New York Botanical Garden. 1917.

² JORGENSEN, I., and STILES, W., Carbon assimilation. A review of recent work on the pigments of the green leaf and the processes connected with them. New Phytol. reprint no. 10. London. Wesley & Son. 1917.

³ BOT. GAZ. 62:417-421. 1916.